What is claimed is:

1. A process for treating the boundary walls of an interior chamber formed in a workpiece, comprising the steps of:

providing a workpiece having an interior chamber;

positioning first and second nozzle members within the interior chamber so that discharge openings of the nozzle members are positioned closely adjacent and directly opposed to one another;

supplying substantially equal streams of pressurized blasting media, as defined by a pressurized carrier fluid having solid abrasive particles entrained therein, to the discharge openings of said nozzle members;

simultaneously discharging substantially equal and opposed high-velocity streams of blasting media from said discharge openings so that the discharged streams, almost immediately after discharge, directly impact one another to cause the blasting media to be deflected radially outwardly in a surrounding annular pattern for high energy impact with the boundary wall of the chamber; and

simultaneously moving the nozzle members, while maintaining them in generally fixed relationship to one another, along the interior chamber so that the blasting media as deflected radially outwardly into the annular pattern progressively treats the boundary wall of the interior chamber.

2. A process according to Claim 1, including the steps of:

providing the workpiece with first and second aligned access openings which communicate with opposite ends of the interior chamber; and

inserting the first and second nozzle members into the interior chamber through the respective first and second access openings so that the discharge openings of

the nozzle members are positioned in closely adjacent and directly opposed relationship to one another; and

thereafter discharging said high-velocity streams of blasting media from the opposed discharge openings.

3. A process according to Claim 2, including the step of synchronously moving the first and second nozzle members, as a unit, in a linear manner generally parallel with the discharge direction of the opposed streams between positions defined adjacent the access openings.

4. A process according to Claim 2, including the steps of:

providing the workpiece with a plurality of said interior chambers which are sidewardly spaced apart and transversely interiorly interconnected, and first and second aligned access openings communicating with opposite ends of each respective interior chamber;

providing pluralities of first and second nozzle members positioned so that each of said first nozzle members is disposed in opposed relationship to a corresponding one of said second nozzle members;

simultaneously inserting all of said first nozzle members into the workpiece and also simultaneously inserting all of the second nozzle members into the workpiece so that each of the opposed pairs of first and second nozzle members is positioned within a respective one of the interior chambers; and

simultaneously supplying substantially equal streams of pressurized blasting media to all of the first and second nozzle members.

5. The process according to Claim 2, including the steps of:

providing the workpiece with a plurality of said interior chambers which are sidewardly spaced apart and

transversely interiorly interconnected, and first and second aligned access openings communicating with opposite ends of each respective interior chamber;

aligning said first and second nozzles with opposite ends of one of said interior chambers and then inserting said nozzles into the chamber with a defined small gap between the opposed tips thereof and thereafter synchronously moving the first and second nozzles linearly along the chamber while discharging blasting media from the nozzles to cause the blasting media to be deflected radially outwardly for high energy impact with the boundary wall of the chamber;

thereafter withdrawing the first and second nozzles from opposite ends of the first chamber and transversely and simultaneously displacing the first and second nozzles relative to the workpiece so that the nozzles align with opposite ends of a second said interior chamber; and

thereafter inserting the nozzles into the second interior chamber and effecting treatment of the boundary wall thereof in the same manner as with respect to the first chamber as defined above.

6. The process according to Claim 1, comprising the step of initially positioning the opposed discharge openings of the first and second nozzle members with a spacing therebetween of no more than about one inch.

7. A process according to Claim 1, including the step of terminating the entrainment of abrasive particles in the high-velocity carrier fluid while continuing to supply the pressurized carrier fluid to the nozzle members as they are synchronously moved within the interior chamber to effect removal of abrasive particles and debris from the chamber.

8. An apparatus for treating boundary walls of an interior chamber formed in a workpiece and which is accessible through first and second access openings which access opposite ends of the interior chamber, said apparatus comprising:

a fixture for positioning the workpiece thereon;

first and second nozzle assemblies positioned on opposite sides of the fixture and respectively including first and second elongate nozzle members which are disposed in generally aligned but opposed relationship, said first and second nozzle members being positioned for insertion through the respective first and second access openings associated with the workpiece when the workpiece is mounted on the fixture;

first and second movable supports which respectively mount the first and second nozzle assemblies thereon;

first and second drive devices interconnected to the respective first and second supports for effecting movement of the respective nozzle assembly from a retracted position wherein the respective nozzle member has a discharge end thereof spaced from the workpiece and an operational position wherein the respective nozzle member is inserted through the respective access opening so that the discharge opening of the nozzle member is positioned within the interior chamber;

said first and second supports and the respective first and second nozzle assemblies mounted thereon being synchronously movable, while maintaining a substantially fixed spatial relationship between the opposed discharge openings of the nozzle members, to effect movement of the discharge openings within the interior chamber; and

a supply source connected to each of the first and second nozzle members for simultaneously supplying substantially identical pressurized streams of carrier fluid and abrasive particles to both nozzle members for

effecting simultaneous discharge from the nozzle members of opposed high-velocity streams of abrasive media defined by said carrier fluid having said abrasive particles entrained therein, whereby the opposed discharged streams directly impact one another within the interior chamber to cause the streams to be deflected radially outwardly in an annular pattern for high energy impact against the boundary walls of the interior chamber.

9. An apparatus according to Claim 8, wherein each of said nozzle members comprises an elongate tubular member having said discharge opening at one end thereof.

10. An apparatus according to Claim 9, wherein said discharge opening is defined within a carbide tip member.

11. An apparatus according to Claim 8, wherein the first and second nozzle assemblies includes plural opposed pairs of first and second nozzle members which are insertable through respective access openings of the workpiece for association with different portions of the interior chamber, the plurality of first nozzle members as well as a plurality of second nozzle members being disposed in generally parallel but sidewardly spaced relationship and being simultaneously movable as a unit.

12. An apparatus according to Claim 8, wherein each of said first and second supports is mounted for generally linear movement in a direction which is generally parallel with an axis which extends through the interior chamber and aligns with the first and second access openings.

13. An apparatus according to Claim 12, wherein the second support is linearly movably supported on the first

support for movement with respect to the first support along a direction which is generally parallel with said axis.

14. An apparatus according to Claim 13, wherein said first drive device is drivingly coupled between said first support and a stationary housing, and wherein said second drive device is drivingly coupled between said first and second supports, whereby activation of said first drive device causes simultaneous linear movement of said first support and said second support.

15. An apparatus according to Claim 8, including a housing structure which includes walls functioning as a shroud for defining therein a treating chamber, said fixture being positioned within said treating chamber, and said nozzle assemblies being disposed on opposite sides of the shroud so that the nozzle members movably project through the shroud for disposition within opposite sides of the treating chamber.

16. An apparatus according to Claim 8, wherein the first and second nozzle assemblies and the respective first and second drive devices are mounted on a transverse movement assembly which permits the first and second nozzle assemblies to be simultaneously transversely displaced relative to the workpiece to permit the nozzles to be sequentially positioned in alignment with different interior chambers of the workpiece.

17. An apparatus according to Claim 8, wherein one of the first and second drive devices has a speed control arrangement associated therewith for varying the speed of movement of the synchronously-moveable first and second

nozzles as they linearly traverse the length of the interior passage.

18. An apparatus according to Claim 8, wherein each of said first and second nozzles comprises an elongate nozzle member having a discharge passage extending lengthwise over a significant length thereof and terminating in a discharge opening at one end of the nozzle member, said discharge passage having a length of at least about 8 inches and a maximum diameter of about 1/4 inch.